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SPECIFICATION FOR MAIZE BRAN AS LIVESTOCK FEED INGREDIENT

(*First Revision*)

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SPECIFICATION FOR MAIZE BRAN AS LIVESTOCK FEED INGREDIENT

(First Revision)

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AMENDMENT NO. 1 JULY 1995
TO
IS 2153 : 1985 SPECIFICATION FOR MAIZE BRAN AS LIVESTOCK FEED INGREDIENT

(First Revision)

(*Page* 6, *clause* **6.2**, *line* 2) — Substitute 'IS 1070 : 1992' *for* 'IS : 1070 - 1977' and in the corresponding foot-note, substitute 'Reagent grade water (*third revision*)' for the existing foot-note.

(FAD 5)

Reprography Unit, BIS, New Delhi, India

Indian Standard
SPECIFICATION FOR MAIZE BRAN AS LIVESTOCK FEED INGREDIENT
(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 31 December 1985, after the draft finalized by the Animal Feeds Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Maize bran consists largely of the coarse and fine fibrous material obtained after the separation of the germ in the wet-milling manufacture of maize starch and other maize by-products. Maize bran is used as livestock feed ingredient.

0.3 This standard was first published in 1962. In this revision, moisture content has been reduced. For the sake of uniformity in testing, reference has been given to IS : 7874 (Part 1)-1975*.

0.4 Inclusion of the aflatoxin limit in the standard was not found feasible at this stage because of the non-availability of a reliable and quick method for its determination and further, data for fixing a safe limit in the product meant for livestock feed was also not available. However, it was a considered view of the committee for fixing this limit as early as possible.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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*Methods of tests for animal feeds and feeding stuffs: Part 1 General methods.

†Rules for rounding off numerical values (*revised*).

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for maize bran obtained in the wet-milling manufacture of maize starch for use as livestock feed ingredient.

2. TYPES

2.1 Maize bran shall be of the following two types:

a) *Coarse Bran* — Consists mostly of the outer coating of the maize kernel and is obtained after separation from the degermed maize in the wet-milling manufacture of maize starch and other maize by-products.

b) *Fine Bran* — Consists largely of the fine fibrous material left as a residue after sieving the slurry subsequent to the removal of germ and coarse bran during the wet-milling manufacture of maize starch and other maize by-products.

3. REQUIREMENTS

3.1 Description — The material shall be free from harmful constituents and shall be free from rancidity, adulterants, insect or visible fungus infestation and from fermented, musty or other objectionable odour. It shall also be free from other extraneous matter.

3.2 The material shall also conform to the requirements prescribed in Table 1.

TABLE 1 REQUIREMENTS FOR MAIZE BRAN AS LIVESTOCK FEED INGREDIENT

(*Clauses* 3.2, 4.2.2 *and* 6.1)

Sl No.	Characteristics	Requirement for		Method of Test [Ref to Clause in IS : 7874 (Part 1)-1975*]
		Coarse Bran	Fine Bran	
(1)	(2)	(3)	(4)	(5)
i)	Moisture content, percent by mass, *Max*	10·0	10·0	4
ii)	Crude protein (N × 6·25), percent by mass, *Min*	7·5	14·0	5
iii)	Crude fibre, percent by mass, *Max*	18·0	9·5	8
iv)	Total ash, percent by mass, *Max*	1·5	1·5	9
v)	Acid insoluble ash, percent by mass, *Max*	0·5	0·5	10

Note — The values specified for requirements (ii) to (v) are on moisture-free basis.

*Methods of tests for animal feeds and feeding stuffs: Part 1 General methods.

4. PACKING AND MARKING

4.1 Packing — Unless agreed to otherwise between the purchaser and the vendor, the material shall be packed in dry and sound jute bags or HDPE bags. The mouth of each bag shall be either machine-stitched or rolled over and hand-stitched with strong twine.

4.2 Marking

4.2.1 Each bag shall be legibly and indelibly marked with the following information:

a) Name and type of the material;
b) Name of the manufacturer; and
c) Net mass in kg, when packed.

4.2.2 Each bag shall also contain a leaflet as well as have a tag attached to it on the outside with the following information:

a) Name and type of the material,
b) Batch or code number,
c) Analytical values for the characteristics as specified in Table 1, and
d) Date of packing.

4.2.3 Each bag may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

5. SAMPLING

5.1 Representative samples of the material shall be drawn and conformity of the material in the lot to the requirements of this specification shall be determined according to the method prescribed in Appendix C of IS : 2052-1979*.

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*Specification for compounded feeds for cattle (*third revision*).

6. TESTS

6.1 Tests shall be carried out as prescribed in col 5 of Table 1.

6.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1977*) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

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*Specification for water for general laboratory use (*second revision*).

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	Unit	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	Unit	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	Unit	Symbol	Definition
Force	newton	N	1 N = 1 kg.m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

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